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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,541	10/21/2003	Yasushi Fujimoto	061069-0306016	9317

909 7590 04/03/2006

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EXAMINER

BUI PHO, PASCAL M

ART UNIT	PAPER NUMBER
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2878

DATE MAILED: 04/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.		Applicant(s)	
	10/689,541		FUJIMOTO ET AL.	
	Examiner		Art Unit	
	Pascal M. Bui-Pho		2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some * c) ☐ None of:
 - 1. ☐ Certified copies of the priority documents have been received.
 - 2. ☒ Certified copies of the priority documents have been received in Application No. 09/832,800.
 - 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office action is responsive to communications filed on 17 January 2006. Presently, claims 1-15 are pending.

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 09/832,800, filed on 12 April 2001.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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4. Claims 1-15 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-37 of U.S. Patent No. 6,649,893, hereinafter referred to as Patent '893. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed invention, claims 1-15, of the Present Application is a similar version of the claimed invention, claims 1-37, of Patent '893 with similar intended scope.

With regards to claims 1, 2, and 11 of the Present Application, claims 1, 28, 29, 31, and 35-37 of Patent '893 disclose a focus detecting device for a microscope comprising: a beam splitting member (beam-splitting member); a multi-beam producing member (multi-beam producing member); a light-blocking member (partially light-introducing member); a light-condensing optical system (light-condensing optical system); and a photodetector (photodetector) having at least two light-receiving sections.

With regards to claims 3-6, 8, 9, and 12-15 of the Present Application, claims 1, 2, 7, 8, 17, 28, 29, 31, and 35-37 of Patent '893 disclose various optical elements, but do not specify an inclusion and/or arrangement of a crystal plate, a quarter-wave plate, and/or a diffuser. Selecting known available optical elements to direct a light beam would have been obvious to one of ordinary skill in the art. At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify Patent '893 accordingly in order to provide more control to the modulation of light beams.

With regards to claims 7 and 10 of the Present Application, claims 2, 3, 4, 12, 15, 18, 28, 29, 31, and 35-17 of Patent '893 disclose a light source, but do not specify an inclusion of a laser light source arranged to be decentered from an optical axis of the microscope. Selecting known

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available illumination means and/or configuration to provide longer lasting life would have been obvious to one of ordinary skill in the art. At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify Patent '893 accordingly in order to provide easier maintenance performance of the microscope.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 2, 11, 12, and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Tanaami (US 2004/0182710).

With regards to claim 1, Tanaami discloses in Fig. 6 a focus detecting device for a microscope, comprising: a light source (101), a partially light-introducing member (102, 103) that causes only a part of a light beam from the light source to enter the microscope; a light-condensing optical system (106, 108) that condenses a light beam reflected from a sample (S) surface of the microscope; a photodetector (109) disposed at a light convergence position of the light-condensing optical system and having at least two-light receiving sections (three light-receiving sections are shown), the photodetector being disposed on an exit side of the light-condensing optical system; and a multi-beam producing member (G) disposed in a path of light from the light source to the photodetector and producing a plurality of light beams, which pass the multi-beam producing member to converge on a plurality of spots on the photodetector.

With regards to claim 2, Tanaami further discloses a focus detecting device for a microscope, wherein the partially light-introducing member is a light-intercepting member (103) that intercepts a beam of light from the light source (101).

With regards to claim 11, Tanaami discloses in Fig. 6 a focus detecting device for a microscope, comprising: a beam-splitting member (103) having a surface from which or through which an incident light beam is reflected or transmitted and is disposed at an intersection of an optical axis of a first path of light and an optical axis of a second path of light; a light source (101) disposed in the first path of light; a multi-beam producing member (G) disposed between the light source and a sample (S) to produce a plurality of light beams; a light-condensing optical system (108) disposed in the second path of light on an exit side of the beam-splitting member, to condense the plurality of light beams passing the beam-splitting member; a photodetector (109) disposed in the second path of light at a light convergence position of the light-condensing optical system and provided with three light-receiving sections, the photodetector being disposed on an exit side of the light-condensing optical system so that the plurality of light beams passing the multi-beam producing member converge on a plurality of spots on the photodetector; and a light-intercepting member (106) disposed between the light source and the photodetector, to intercept a part of light beams passing there.

With regards to claim 12, Tanaami further discloses a focus detecting device wherein the light-intercepting member (106) is disposed, along the light path, between beam-splitting member and an objective lens of the microscope.

With regards to claim 14, Tanaami further discloses in Fig. 13 a focus detecting device for a microscope, wherein the light-condensing optical system (108) comprises a lens element

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that condenses the plurality of light beams in such a manner that each of the plurality of spots on the photodetector (109) has a shorter diameter in a direction in which the spots are aligned (vertical) than a diameter in a direction perpendicular to the direction in which the spots are aligned (horizontal).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 3-10, 13, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaami (US 2004/0182710).

With regards to claims 3 and 5, Tanaami discloses a focus detecting device for a microscope, but lacks an inclusion of a first crystal plate for the multi-beam producing member and wherein a second crystal plate is disposed on an exit side of a quarter-wave plate. Selecting a particular optics element for performing similar optical functions would have been obvious to one of ordinary skill in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Tanaami accordingly in order to provide a desired selection of the optics component for the microscope. The further inclusion of a second crystal plate disposed on an exit side of a quarter-wave plate would have been obvious for similar reasons set forth above.

With regards to claim 4, Tanaami discloses a focus detecting device for a microscope, but lacks an inclusion of a quarter-wave plate disposed on an exit side of the first crystal plate.

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Selecting a particular optics element for performing similar optical functions would have been obvious to one of ordinary skill in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the aforementioned U.S. patent accordingly in order to provide more control to the modulation of light beams.

With regards to claims 6 and 9, Tanaami discloses a focus detecting device for a microscope, but fails to further disclose a diffuser disposed on an exit side of the light source, to diffuse rays from the light source. The use of a diffuser for providing a desired distribution of light in an optical system would have been obvious to one of ordinary skill in the optics art. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Tanaami accordingly in order to widen the angle of the modulated light beam.

With regards to claims 7 and 10, Tanaami discloses a focus detecting device for a microscope, but fails to specify whether or not the light source is constructed as a surface-illuminant laser diode having a plurality of radiant points so that arrangement of the multi-beam producing member is dispensable. Selecting a specific or particular structure and/or type of a light source in order to provide a long lasting life of the light source would have been obvious to one of ordinary skill in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Tanaami accordingly in order to provide easier maintenance performance for the microscope. The further inclusion of a specific partially light introducing member as claimed in claim 10 would have also been obvious for similar reasons set forth above.

With regards to claim 8, Tanaami discloses a focus detecting device for a microscope, but lacks an inclusion of at least one diffraction grating and a crystal plate as the multi-beam producing member. Selecting particular optics elements for performing similar optical functions

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would have been obvious to one of ordinary skill in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Tanaami accordingly in order to provide a desired selection of the optics component for the microscope.

With regards to claims 12 and 13, Tanaami discloses a focus detecting device for a microscope, but fails to disclose the use of the light-intercepting member disposed between the beam-splitting member and the light-condensing optical system or a multi-beam producing member disposed between the beam-splitting member and an objective lens of the microscope. Selecting particular locations for optics elements for performing similar optical functions would have been obvious to one of ordinary skill in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Tanaami accordingly in order to provide a better optics design of the microscope.

With regards to claim 15, Tanaami discloses in Fig. 13 a focus detecting device for a microscope, wherein the light-condensing optical system (108) comprises a lens element that condenses the plurality of light beams in such a manner that each of the plurality of spots on the photodetector (109) has a shorter diameter in a direction in which the spots are aligned (vertical) than a diameter in a direction perpendicular to the direction in which the spots are aligned (horizontal).

Response to Arguments

9. Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Telephone/Fax Information

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pascal M. Bui-Pho whose telephone number is (571) 272-2714. The examiner can normally be reached on Monday through Friday: 8:30 a.m. - 5:00 p.m.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on (571) 272-2328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Pascal M. Bui-Pho
Examiner, Art Unit 2878
28 March 2006



Georgia Epps
Supervisory Patent Examiner
Technology Center 2800